

**LOAN AWARD REQUEST**

CEC-271 (Revised 05/11)

CALIFORNIA ENERGY COMMISSION

To: Grants and Loans OfficeDate: 06 / 28 / 2011Project Manager: Akasha Kaur KhalsaPhone Number: (916) 657-4854Office: Special Projects OfficeDivision: Fuels and Transportation DivisionMS- 23Project Title: Imperial County HVAC Central Sys**Type of Request:** *(check one)*

<input checked="" type="checkbox"/> <b>New Agreement:</b> <i>(include items A - F from below)</i>	Agreement Number: <u>Assigned by the G&amp;L Office</u>
Program: <u>3% ARRA SEP ECAA Loan</u>	
Solicitation Name: _____	
Legal Name of Recipient: <u>County of Imperial</u>	
Recipient's Full Mailing Address: <u>155 S. 11th Street</u> <u>El Centro, CA 92243-2851</u>	
Recipient's Project Officer: <u>Norma Lillegard</u> Phone Number: <u>(760) 482-4462 ext.</u>	
Email Address: <u>normalillegard@co.imperial.ca.us</u>	
Agreement Start Date: <u>    </u> / <u>    </u> / <u>    </u> Agreement End Date: <u>03 / 31 / 2012</u>	
Annual Energy Savings: <u>\$ 89,500.00</u> Total Loan Amount: <u>\$ 816,494.00</u>	
Number of Repay Periods: <u>(Leave blank if repay is based on energy savings)</u>	

<input type="checkbox"/> <b>Amendment :</b> <i>(Check all that apply)</i>	Agreement Number: _____
<input type="checkbox"/> Term Extension – New End Date: <u>    </u> / <u>    </u> / <u>    </u> <input type="checkbox"/> Change of Scope <i>(include items A – G from below, as applicable)</i> <input type="checkbox"/> Loan Augmentation: \$ <u>    </u>	

**ITEMS TO ATTACH WITH REQUEST:**

- |   |  |                                 |
|---|--|---------------------------------|
| A. Loan information including application and budget details. | D. CEQA Compliance Form.               | F. ECM Codes, if applicable.    |
| B. Recipient Resolution.                                      | E. Other Documents as applicable.      | G. Justification for Amendment. |
| C. Special Conditions, if applicable.                         | • Copy of Pre-Award Correspondence     | H. Subcontractor Information    |
|   | • Copy of All Other Relevant Documents |                                 |

**California Environmental Quality Act (CEQA)**

<input checked="" type="checkbox"/> CEC finds, based on recipient's documentation in compliance with CEQA:		
<input checked="" type="checkbox"/> Project exempt: Section 15301, Class 1	NOE filed: <u>04 / 20 / 2010</u>	
<input type="checkbox"/> Environmental Document prepared: <u>Type</u>	NOD filed: <u>    </u> / <u>    </u> / <u>    </u>	
<input type="checkbox"/> Other: <u>Explain</u>		
<input type="checkbox"/> CEC has made CEQA finding described in CEC-280, attached		

**Funding Information:**

Source #1: <u>ECA</u>	Amount: <u>\$ 479,187.75</u>	Statute: <u>1994</u>	FY: <u>2011</u>	Budget List #: <u>401.007</u>
Source #2: <u>ECE-ARRA</u>	Amount: <u>\$ 337,306.25</u>	Statute: <u>2009</u>	FY: <u>2011</u>	Budget List #: <u>601.003D</u>
Source #3: <u>    </u>	Amount: <u>\$ 0.00</u>	Statute: <u>    </u>	FY: <u>    </u>	Budget List #: <u>    </u>

**Business Meeting Approval:** *(refer to Business Meeting Schedule)*Date due to Secretariat: 07 / 05 / 2011Proposed Business Meeting Date: 07 / 27 / 2011☐ Consent ☒ DiscussionBusiness Meeting Participant: Akasha Kaur KhalsaTime Needed: (5 minutes)**Agenda Notice Statement:** *(This is the description that will appear on the agenda)*

Possible approval of a new ARRA loan to retrofit 288 tons of air handlers, controls, and their HVAC central system components: a 100 ton high efficiency scroll chiller, cold water variable speed pumps and 2 cooling towers for the Juvenile Detention Complex of the County of Imperial. This three percent interest loan for \$816,494.00 must be spent by March 31, 2012. It is augmented by an EECBG Grant. The annual electric savings are estimated as 734,728 kWh/yr which saves the County \$89,500/year. 244 tons of Carbon Dioxide equivalents will be reduced each year. Eleven Full Time Equivalent monthly jobs are expected to be funded in about December. These retrofits have approximately a 9.1 year simple payback. (ECAA and/or ARRA funds)



Please list all known Subcontractors paid with proceeds connected to the project mentioned above:  
unknown

Project Manager	Date	Office Manager	Date	Deputy Director	Date
Executive Director	Date	Presiding Policy Committee	Date	Associate Policy Committee	Date

## EXHIBIT A

### ATTACHMENT 1

#### BUDGET DETAIL/PROJECT COST AND SAVINGS

This loan is made to the County of Imperial ("Borrower") for an energy savings Project. The Project consists of retrofit 288 tons of air handlers, controls and their HVAC central system components: a 100 ton high efficiency scroll chiller, cold water variable speed pumps and 2 cooling towers to be installed at the Juvenile Detention Complex in the City of El Centro, CA.

The Table below summarizes the estimated Project cost(s), saving(s) and simple payback(s) for the Project.

TABLE 1: Summary of Project Cost and Savings:

<b>Energy Efficiency Projects</b>	<b>Estimated Total Project Cost</b>	<b>Energy Commission Loan</b>	<b>Estimated Annual Energy Cost Savings</b>	<b>Simple Payback* (Years)</b>
Repair Economizers of Building 39 packaged AC Units 7, 8, 9 and 10	\$1,146		\$3,200	
Replace 288 tons rooftop Air Handlers & controls	\$600,797		\$54,300	
Replace Failed Chiller 2 with high efficiency scroll chiller	\$112,081		\$11,000	
Convert constant volume chilled water pumping to variable volume pumping	\$147,576		\$13,000	
Replace two existing cooling towers with new variable speed towers	\$198,400		\$8,000	
<b>GRAND TOTAL ALL MEASURES</b>	<b>\$1,060,000</b>	<b>\$816,494</b>	<b>\$89,500</b>	<b>9.1</b>

\* The simple payback is based on the loan amount.

The Borrower shall implement the Project in Table 1. Failure to implement all portions of the Project may reduce the approved loan amount. If necessary, the reduced loan amount will be determined by multiplying the annual energy cost savings by 11. If the Borrower has received disbursements that exceed the amount of the reduced loan, the Borrower shall refund the difference to the Energy Commission.

# Memorandum

To: Robert Oglesby  
Executive Director

Date: June 28, 2011

Telephone: 916-657-4854

From: California Energy Commission  
1516 Ninth Street MS-23  
Sacramento CA 95814-5512

Subject: STAFF RECOMMENDATION TO APPROVE AN \$816,494 ECAA AND/OR ARRA LOAN WITH 3% INTEREST TO THE COUNTY OF IMPERIAL TO INSTALL HVAC SYSTEMS TO BE CONSIDERED AT THE JULY 27, 2011, BUSINESS MEETING.

## Summary of Item

The County of Imperial (County) has requested a loan for \$816,494.00 to replace a central heating and air conditioning system on three Juvenile Detention buildings in El Centro, California. Plans are to replace two existing cooling towers with new variable speed towers, convert constant volume chilled water pumping to variable volume pumping, replace failed Chiller 2 with a high efficiency scroll chiller and replace 288 tons of air handlers.

This project will reduce the County's annual electrical energy use by an estimated 735,000 kWh. This will save the County approximately \$ 89,500 annually in energy costs. Peak demand will be reduced by 28.4 kW. More than 244 tons of CO<sub>2e</sub> will be reduced from the comfort operations each year.

An ECAA Technical Assistance package defined the scope of work needed.

The total project is estimated to cost \$1,060,000, of which \$816,494 will be financed with an Energy Commission loan at an interest rate of three percent. The remaining \$243,506 will be financed by the ARRA EECBG CBG-09-140. Simple payback is 9.1 years based on the loan amount. Table 1 summarizes the estimated project cost(s), saving(s) and simple payback(s) for the project.

TABLE 1: Estimated Energy Efficiency Project Savings:

<b>Energy Efficiency Projects</b>	<b>Estimated Total Project Cost</b>	<b>Energy Commission Loan Amount</b>	<b>Estimated Annual Energy Cost Savings</b>	<b>Simple Payback (years) based on loan amount</b>
Repair Economizers of Building 39 packaged AC Units 7, 8, 9 and 10	\$1,146	0	\$3,200	-
Replace 288 tons rooftop Air Handlers & controls	\$600,797	\$462,609	\$54,300	8.5
Replace Failed Chiller 2 with high efficiency scroll chiller	\$112,081	\$80,191	\$11,000	7.3
Convert constant volume chilled water pumping to variable volume pumping	\$147,576	\$110,192	\$13,000	8.5
Replace two existing cooling towers with new variable speed towers	\$198,400	\$163,502	\$8,000	20.4
<b>Project Total</b>	<b>\$1,060,000</b>	<b>\$816,494</b>	<b>\$89,500</b>	<b>9.1</b>

\* Payback based on the total project cost. The payback based on the loan amount is 9.1 years.

One ARRA job Full Time Equivalent (FTE) is 173.33 hours a month. The labor for this installation of a million dollar central air conditioning system was estimated at 11 FTE.

***Justification for Action Requested:***

The County is committed to reducing its energy consumption and to the reduction of greenhouse gas emissions. This central system HVAC retrofit, when completed, will reduce approximately 244 tons of harmful carbon dioxide emissions annually.

Energy Commission staff has determined that the loan request for the County of Imperial is technically justified and meets all requirements for a loan with ARRA Funds. The program requires repayment of the loan, interest and principal, within 15 years. This is equivalent to projects having a simple payback of 11 years or less. As this loan has a

simple payback of 9.1 years, it meets the requirement of the loan program. As a result, staff recommends approval of the loan to the County of Imperial.

Project Manager

Akasha Kaur Khalsa, Energy Analyst  
Special Projects Office, Fuels and Transportation Division

Oral Presentation

Staff will be prepared to discuss this recommendation and to respond to questions regarding the loan.

Business Meeting Participants

Pat Perez, Deputy Director, Fuels and Transportation Division  
Akasha Kaur Khalsa, Energy Analyst, Fuels and Transportation Division

Commission Action Requested

Approve the loan and authorize the Executive Director to execute the loan documents.

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PAT PEREZ, Deputy Director,  
Fuels and Transportation Division



**County of Imperial  
HVAC Project  
Loan Amount: \$816,494.00**

**Pros and Cons**

The following are the Pros and Cons to the Energy Commission of providing a loan to the County of Imperial:

**Pros:**

- To reduce energy use, electrical demand, and greenhouse gas emissions through energy efficiency is consistent with the Energy Commission's *2010 Integrated Energy Policy Report*.
- Meets the objective of the Energy Conservation Assistance Act (Public Resources Code Section 25412 et. seq.) which is to provide loans to public agencies to maximize energy use savings and implementation of cost effective energy efficiency measures.
- Provides a loan to help the County install energy efficiency projects that it may otherwise not be able to fund.

**Cons:**

- None